

Loudoun County Strategy for Watershed Management Solutions (SWMS)

Meeting Summary

February 22-23, 2006

Best Western Hotel, Leesburg, VA

The Strategy for Watersheds Management Solutions is designed to develop a strategic plan to manage, on a county-wide basis, Loudoun's watersheds through a collaborative, consensus-building effort between various groups including government agencies (county, state, and federal), active community and citizen groups, development and commercial groups, agricultural interests, and non-governmental organizations. This strategic plan will be used to guide a subsequent, comprehensive watershed management plan.

Summary, Wednesday, February 22nd

Approximately 50 people gathered for the first meeting of the Loudoun Strategic Watershed Planning Solutions (SWMS) Stakeholders Team. Board of Supervisors members Sally Kurtz and Stephen Snow welcomed participants to the meeting, and then the project manager, Kelly Baty of Loudoun County's Department of Building and Development provided an overview of the SWMS process. Both Supervisors indicated their support for the SWMS effort and the need for a plan that will protect the County's water quality and quantity for future generations. Supervisor Snow conveyed that he supported resource protection and expressed hope that this effort for protecting the County's resources would not be overtaken by other agendas. Supervisor Kurtz described her history growing up in the County and swimming in streams, and lamented the fact that people can no longer drink the water from the County waterways. It was her expressed hope to see the County's water resources restored to a quality healthy enough to drink.

Following this opening, facilitators Tanya Denckla Cobb and Christine Gyovai from the University of Virginia's Institute for Environmental Negotiation (IEN) provided an overview of the day.

SWMS Team members discussed protocols for meeting participation, including the Team's specific purpose, defining how the group would make decisions by consensus, guidelines for discussion, and how the media might be involved in the watershed planning effort. A summary of the meeting protocols and guidelines, including how decisions will be made, may be found at the end of the meeting summary.

The facilitators reviewed the IEN's summary of findings from interviews it conducted prior to the SWMS Team meeting. The IEN conducted 17 interviews of Team members representing diverse perspectives to build understanding about issues, opportunities, and data needs, and to help shape the agenda for the first SWMS meeting. Key issues and concerns identified during this interview process included: growth and development concerns; ideas for watershed plan implementation; citizen participation during the watershed planning process; creating clarity and shared understanding; identifying specific watershed issues or problems; garnering political leadership and support for the watershed plan; issues around policies, regulations, services; education and outreach; knowledge management; and developing clear watershed goals.

Key opportunities for the watershed planning process included: increased awareness, education, and commitment; resource mobilization and organization; building broad-based support; harnessing the potential of Loudoun's Citizens; developing long-term Loudoun County staffing capacity and commitment; learning and implementing new ideas and technologies; and protecting the many good existing qualities of Loudoun's watershed.

The Team was invited to discuss IEN's summary of findings and to add any additional ideas, concerns or opportunities that were not yet identified. The following additional ideas, concerns, and opportunities were offered by SWMS team members:

- Funding

- Funding needs to be addressed and incorporated into all phases of watershed planning.
- Watershed Planning Process
 - It is important to establish at the outset of the planning process the goals, objectives, and evaluation criteria as well as building in a strategy for revisiting and updating the plan over time so it is a living document.
 - The planning strategy should also identify what approaches to watershed planning don't work and/or are not applicable to Loudoun.
- Key issues to be addressed in the Watershed planning process
 - The plan should define desired outcomes for the watershed plan and its implementation.
 - The plan should be designed to integrate land use policies and tools such as Zoning Ordinance, the Facilities Standards Manual, transportation planning, etc.
 - Water quantity and habitat are also important issues to address.
 - Recognize that the selection of different data collection methods may be driven by cost, and the question of data needs to be explored further.
 - A cautionary approach is needed when considering watershed planning solutions, for example Low Impact Development (LID) is not a panacea for complex issues and problems.
 - Each watershed is unique and has its own carrying capacity that should determine whether it should have a preservation or restoration plan.
- Citizen involvement
 - Success of the plan will ultimately depend on people valuing the outcomes and contributing to watershed activities.
 - The plan should consider social justice issues to ensure that strategies are accessible to people of all socio-economic levels.
- Education
 - Avoid 'recreating the wheel' by using existing education/outreach programs.
 - It is important that education and outreach efforts stay independent of the political arena.
 - Education and training is an essential part of the plan, for example, educating and providing new septic owners with concrete skills and knowledge about monitoring and maintaining septic systems.
 - There is an opportunity for stream valley parks to serve as a venue for education and outreach.
- Regulations, ordinances, permitting:
 - Existing regulations need to be enforced.
 - The Stormwater permitting program is still developing and other programs will need to be used in conjunction with the program for addressing watershed problems.
 - Clarification is needed from the State to clarify issues where there are inconsistent interpretations of court rulings. For instance, with regards to alternative septic systems, there are different alternative septic system approaches in Clarke and Fauquier Counties.
 - Watershed planning strategies should be made while being mindful of Virginia's Dillon Rule legal framework.
- Implementation:
 - There is the need to specify and clarify who will implement what, and who has authority for implementation.
- Reality and limitations:
 - It was mentioned several times and in a number of ways that the SWMS Team may not have all of the tools and expertise to conduct this endeavor and that the SWMS Team should be willing to seek out the necessary expertise to assist with the elements of the watershed management strategy, e.g., legal issues dealing with the state's Dillon Rule, hydrologic-technical information for models, and independent analyses of data, etc.

Following the morning discussion of ideas and concerns for the strategy for watershed planning, three presentations were given in the afternoon. Copies of all the presentation are available by contacting Jason Espie at jespie@virginia.edu or 434-924-0285.

The first presentation on "The State of Loudoun's Streams" was given by Darrell Schwalm of Loudoun Watershed Watch. Comments and questions after the presentation included:

- Some of the livestock and agricultural data used in the presentation is outdated. Loudoun County staff said that any data they have is available to citizens, and more up-to-date agricultural data could be available.

- State standards are needed for turbidity (a measure of the cloudiness of water) and dissolved oxygen, and standards need to be developed for local laboratories to gather this data.
- There was general discussion regarding the suggestion in the presentation for a Loudoun Water Management Authority.

The second presentation on “Defining Our Watershed through Mapping Capacity” was given by Ed Erwin and Trent Small from Loudoun County Office of Mapping. Comments and questions after the presentation included:

- The speakers asked for guidance from the SWMS team in identifying the data needed, what questions to ask, in order to create maps that will answer those questions.
- There was a question about whether the County’s data is compatible with other organizations and agencies (such as an overlay of the Catocin TMDL). This issue will be addressed at the next SWMS Team meeting.

The third presentation, “Water Forum Overview”, was given by Todd Danielson of Loudoun County Sanitation Authority. Comments and questions after the presentation included:

- It is important to integrate and connect the efforts of the Water Forum to the Loudoun SWMS process as they are dealing with similar issues. The question is *how* to integrate the two efforts.
- An Education Center in Ashburn that LCSA is planning could be an excellent resource for the SWMS process.

Summary, Thursday, February 23rd

The second day of the meeting began with a welcome of new participants, a brief recap of the previous day’s progress, and an overview of how the SWMS process fits into the larger watershed planning process. The following graphic outlines the conceptual framework of the SWMS process:

A. Vision and Need for Watershed Planning



B. Loudoun County Grant for Strategic Planning (2003)



C. IEN Contracted to Facilitate Strategic Planning; IEN Interviews with Stakeholders (Jan-Feb 2006)



D. SWMS Team meeting (Feb-May 2006): *develop a framework and strategy for the watershed planning effort, and develop declaration of cooperation (DOC)*



E. DOC submitted to BOS and Towns for review and adoption; submitted to Planning Commission for information (June 2006)



F. RFP for the Comprehensive Watershed Management Plan development (*funding includes EPA grant*)



G. Plan developed using/incorporating the framework and strategy for the planning effort developed by the SWMS team, including recommendations for citizen involvement



G. Comprehensive Watershed Management Plan completed



H. Submitted to BOS and Towns for review and adopted; submitted to Planning Commission for information



I. Watershed Plan implemented by County and citizen groups

The facilitators noted that commitments by SWMS Team members could cover such things as:

- A commitment to continue to participate in E, G., H, I
- A commitment to obtain and/or share data in G and I
- A commitment to partner on grants for F, G, and I
- A commitment to partner or conduct outreach and education during E through I

Following this overview, Team members expressed a number of concerns. A major concern among Team members is that the SWMS effort and recommendations not be wasted, or ignored, or marginalized.

In response to the facilitator's comment that the development of a watershed plan for all of Loudoun County (Phase F) could take a number of years, based on the experience of Fairfax County, a preference was expressed that Loudoun County *not* take years to produce or implement its watershed plan. Additionally, some members noted that certain aspects of watershed protection will need to move forward regardless of the pace of the watershed planning process.

Some members expressed particular support for the fact that the SWMS process will result in a document that will highlight areas of agreement as well as long term stakeholder commitments and engagement.

For the remaining two SWMS meetings, some participants suggested that more participants should be invited from the development and building industry as well as more landowners, farmers and agricultural community representatives. One technique would be to identify the largest landowners along river corridors, perhaps using GIS, who could then be invited to participate. The facilitators noted that 125 people had been invited, including many people from these sectors who either had not responded or been able to attend. They assured the Team that further efforts would be made to include representatives of these interests.

The facilitators also reviewed the updated process for consensus decision-making reflecting the Team's comments (see the meeting protocols at the end of the summary for details). The Team agreed by consensus to use the revised consensus decision-making definition and process.

The Watershed Today: current activities and knowledge

A presentation on "Impaired streams (TMDLs – Total Maximum Daily Loads)" was given by Bryant Thomas, from the Department of Environmental Quality. The discussion points following this presentation include:

- Two TMDLs have been completed in Loudoun County, and only one implementation plan has been completed (Catoclin Creek).
- Mr. Thomas clarified the difference between a TMDL study and establishing an implementation plan for a TMDL. The TMDL study identifies the types of pollutants, the sources of those pollutants, and the amount of pollutants that need to be reduced in order for the stream to reach its water quality goal, e.g., swimmable, fishable, etc. The implementation plan takes this information and identifies what various contributors and stakeholders will do to help achieve the targets for pollution reduction. An implementation plan is essential to put "teeth" into the TMDL study.
- In response to a question about what specific actions might be included in an implementation plan, Mr. Thomas explained that methods to reduce bacteria in streams include keeping cows out of the streams, planting riparian buffers, establishing no-graze zones near streams, and other agricultural Best Management Practices (BMP) and wildlife BMP practices. An EPA Demonstration Grant was suggested as one method for farmers to put BMPs in place. In addition, updating aged septic systems is an important action that can be taken, as well as repairing or removing direct pipe discharges into the stream.

- One participant asked what percentage of Loudoun County's water is monitored by DEQ. The answer is complex and depends on the type of monitoring in question, as there are several different types of monitoring. There is no easy, simple answer to this question.

Next, Gem Bingol from the Piedmont Environmental Council gave a presentation "Watershed Protection and Land Conservation." Following her presentation Team members asked numerous questions. One participant asked why someone would be interested in conservation easement. Ms. Bingol summarized the benefits of conservation easements, including a direct tax benefits for estate planning, or the potential to sell tax credits for those that don't need or quality for tax breaks. Another participant asked where should one take a report like the Goose Creek Vulnerability Analysis, who will look at it, evaluate its findings and act on its recommendations? The response was that this strategic watershed planning process aims to answer those questions, including what analysis or information currently exists, who is responsible for addressing the issues and problems, etc.

A concern was raised that local governments are usually over-committed. There is usually a finite number of people and infinite projects, and thus it will be necessary to get guidance from the Board of Supervisors and County Administration on what tasks have priority. Other Team members explained that the Fairfax County watershed planning effort received Board of Supervisors approval very early on, when it approved the initial grant in 2003, and resources and staff were allocated for planning as a result of this support. Staff at the Fairfax County Department of Public Works and Environmental Services (DPWES) were charged with coordinating the watershed strategic planning effort. It was noted that the Northern Virginia Soil and Water Conservation District also plays a role in Fairfax County helping with citizen outreach and education and monitoring activities.

A presentation on the "Goose Creek Source Water Protection Plan" was given by Tony Dawood of Loudoun County Sanitation Authority. Following this presentation, some Team members applauded the LSCA Goose Creek source water study as very helpful, and asked how it has been used by the County. Mr. Dawood and other Team members explained that some study recommendations are being implemented, such as environmental review of permits and land use requiring a 300-foot buffer as well as the recommendation that dry ponds not be used in new development in the County Facilities Standards Manual. However, some members suggested that the study has not received leadership at the Board level to direct County attention to protecting source water in a clear, focused manner.

Concern was expressed that studies are now showing that streams and reservoirs are contaminated with pharmaceuticals and other human-related contaminants, at low levels, and that water treatment plants do not yet treat for these chemicals. When they do, the cost of drinking water will rise dramatically, and then citizens will understand and rally behind the importance of efforts to protect water quality. Also, another member noted that we do not have to wait for this to happen, as studies show that citizens do and will support raised taxes or bonds to protect drinking water, and that holds true throughout the nation.

Another participant noted that developers need to know what is predictable, and that the "rules of development" need to be communicated clearly and not changed midstream. The need for more BMPs throughout the County needs to be communicated clearly and consistently.

Next, Jason Espie from IEN presented a draft "Inventory of Watershed Activities in Loudoun County," which IEN was contracted by Loudoun County to develop. The inventory is an effort to survey and compile all relevant activities, organizations, studies, and sources of data relating to watersheds in Loudoun County. The inventory was presented as a work-in-progress and Mr. Espie noted that IEN needs input from all Team members to complete this inventory. Information was obtained from stakeholder interviews, web searches, and documents, studies, and proposals forwarded to or obtained by IEN staff. It was acknowledged that much more work is needed and an appeal was made to participants for input, additions, and corrections feedback to improve and complete this inventory. **The SWMS team was asked to send input on the inventory to Jason Espie at jespie@virginia.edu.** Some initial comments from SWMS Team members include:

- The Loudoun County Park Authority has already assembled acreage for stream valley trails, and this should be included in the inventory.
- It is important to include ground water information in this inventory as well, and or be more clear about where it is already covered in the inventory.

- Think about also creating appendices that can sort information in different ways, such as all those projects related to each organization.

Reviewing Watershed Planning

The SWMS Team next moved to a discussion of watershed planning. Christine Gyovai presented an “Overview of Watershed planning.” One Team member asked how watershed plans address the Not In My Back Yard (NIMBY) factor? The facilitators acknowledged that NIMBY stances by people are challenges and noted that the motivations that drive NIMBY can be transformed into NIMBI, or Now I Must Become Involved. Another Team member suggested that Loudoun’s watershed planning process should look closely at possible impediments for watershed planning, and reach agreement on how to be successful. Another Team member suggested that it will be necessary to determine who is taking the lead for watershed planning in Loudoun.

Tanya Denckla Cobb presented “Two Models for Watershed planning,” a handout that compares and contrasts two watershed planning efforts in Virginia, one that is for highly developed Fairfax County and one for very rural Page County. Team members discussed the applications and relevancy of these models for Loudoun’s watershed planning effort.

- The Team discussed the very different growth rates between Loudoun and Fairfax Counties. There is less developed land in Loudoun, and Fairfax is far more built-out. Not as much modeling may be necessary in Loudoun, and significant data already exists, which was not the case for Fairfax. Historically, Fairfax initiated its first watershed plan in response to development pressures, and Loudoun may be at the same point now. A question was raised about the accuracy of the handout’s growth rate of 41% for Loudoun. The facilitators clarified that the growth rate is for the time period of (2000-2004) (*Note: information on growth rates obtained from: <http://quickfacts.census.gov/qfd/states/51/51107.html>*).
- Team members asked about how funds are raised for the watershed planning in Fairfax. Fairfax allocated \$0.01 from every real estate property tax dollar for stormwater planning and infrastructure. \$18 million was raised in 2005, and this continues to remain a dedicated revenue stream. In addition, the pro-rata share contributions from private developers complement the Capital Improvement allocations, so the funding is both public and private.
- One Team member suggested that the Declaration of Cooperation should address how to meet State TMDL regulations.
- Another Team member suggested that Loudoun has a lot of area to protect and preserve, and that it would be beneficial to look at Montgomery County as a model for watershed planning. Specifically it would be helpful to look at its County-wide stream assessment strategy and tools such as protection area design, overlay zones, etc.
- A Team member suggested that SWMS address how Loudoun should prioritize its diverse watersheds. There are critical areas, restoration areas, and sensitive areas and the SWMS can outline how priorities should be ranked.

The discussion on the Fairfax and Page county models segued into an overview of Fairfax County Watershed Plan given by Matt Meyers, Fairfax County Department of Public Works and Environmental Services, Stormwater Division. The questions, comments and discussion on Fairfax’s experience continued. The main discussion points were as follows:

- What were Fairfax County’s motivations for its current watershed planning effort? Fairfax’s first Watershed Plan, developed in the 1970’s, primarily focused on quantity and flooding issues; this plan was outdated and had a number of unimplemented elements. It was widely recognized that it was time to update the Watershed Plan. Fairfax’s current watershed planning effort began about 5 years ago at a kickoff meeting in 2001.
- It can be beneficial to take time to do the watershed planning process in stages and not all at once. The Rapid Stream Assessment Technique (RSAT) was used by Fairfax, and may prove useful for Loudoun. About 30% of Fairfax’s planning cost is for modeling, though this level may not be necessary or possible in other counties.
- In Fairfax the starting watershed analysis and public outreach were done in tandem, and delays in modeling ended up in causing delays in the public involvement process. Ideally the watershed analysis would precede the formation of a Citizen Advisory Committee.

- Unlike Loudoun, Fairfax is dealing with a lot of older infrastructure and legacy development with no or poor stormwater management controls. Fairfax is now addressing more restoration of damaged streams, or retrofitting of outdated or failing stormwater management infrastructure. Loudoun has more to protect and the SWMS should address this.
- EPA Resource: “Handbook for Developing Watershed Plans.” http://www.epa.gov/owow/nps/watershed_handbook/
- EPA Resource: Rapid Bioassessment Protocol (EPA). <http://www.epa.gov/owow/monitoring/rbp/>
- Did the Chesapeake Bay Preservation Act (CBPA), or other regulatory drivers push the Fairfax planning efforts? Yes, the CBPA requirements were a motivation for the recent Fairfax watershed plans. The National Pollutant Discharge Elimination System (NPDES) requirements and TMDLs are taken into account in the Fairfax plan.

Creating a Common Vision for Loudoun’s Watershed Plan

The facilitators introduced a draft outline of a Declaration of Cooperation (DOC). The facilitators proposed that the outcome of the SWMS Team work could be a DOC that outlines the SWMS Team’s consensus recommendations for a strategy for Loudoun’s watershed planning effort. The draft outline was informed by IEN’s stakeholder interviews and identifies the major topics that could be important for Loudoun’s watershed planning strategy. As the SWMS Team continues its work, the topics for the DOC may expand or shrink as needed. The Team would begin by discussing in three small groups the following major topics:

- Small Group #1: Goals and values for watershed planning, and mechanisms for citizen involvement during the watershed planning process.
- Small Group #2: Watershed planning elements, flow of activities, and criteria for prioritization.
- Small Group #3: County coordination and involvement of decision-makers.

Each group of SWMS team members rotated through each topic, providing everyone an opportunity to contribute to each topic. Summaries of each of the three working group follow.

Report of Group 1: Overall goals, values, and mechanisms for citizen involvement

The SWMS Team was asked to develop guiding principles and values that should drive Loudoun’s watershed planning process. It was also asked to articulate principles and ideas for citizen involvement in the planning process. In three successive small groups, the SWMS Team engaged in a lively discussion during which a wide array of ideas were developed. Below is an initial draft summary of the comments from the SWMS Team members who were encouraged to brainstorm ideas, but not yet evaluate them.

Guiding Principles for Loudoun’s Watershed Planning Process

- Create a realistic, achievable, implementable, balanced plan that is science-based.
- Create a flexible, dynamic, and simple plan.
- Address resources for implementation in the watershed planning process (both monetary, in-kind and staff).
- Consider economic development, jobs, and housing needs (current and future) in the creation of the plan.
- Build consensus among the diverse views.

Values that Should Drive Loudoun’s Watershed Planning Process

- Provide clean drinking water for all of Loudoun’s citizens.
- Plan for the needs of future generations.
- Create mechanisms to enable all of Loudoun’s citizen’s to be engaged, informed, and active in watershed planning.
- Preserve economic development opportunities in the watershed.
- Recognize and foster appreciation for the intrinsic value of nature through stewardship activities and other means.

Goals for Loudoun’s Watershed Plan

- Protect and restore water quality so that Loudoun streams are fishable and swimmable, and to meet the goals of the Chesapeake Bay Preservation Act.
- Protect water supply for current and future demands for both ground water and surface water, through private and public means.
- Preserve the high quality of life that Loudoun offers including recreational opportunities, viewshed, etc.
- Protect public and environmental health.
- Protect habitat, especially for threatened, rare, or endangered species.
- Preserve functions and benefits of natural resources. Recognize the economic value of a healthy watershed.
- Preserve farming as well as opportunities for economic development in Loudoun County.
- Use a “smart growth” approach to planning.
- Raise awareness of citizens and engage citizens in planning efforts.
- Coordinate efforts, data, and resources within the watershed.
- Ensure that the watershed plan is in compliance with existing regulations/ ordinances, and enforce/ support those regulations and ordinances.

Citizen involvement in the Watershed Planning Process

- Consider using 5 to 12 citizen subwatershed committees, one for each subwatershed plan. The selection process for the citizen committees needs to be addressed.
- Consider establishing a County-wide committee or task force that would help guide the larger watershed planning process; this committee could include liaisons from the subwatershed committees and could also include resource people and Loudoun County staff
- Consider using Loudoun Watershed Watch (LWW) as a forum for citizen engagement in the County. If this were to occur, the LWW would need to expand its involvement of the development and agricultural community. Another possibility would be to have representatives from the subwatershed committees serve on LWW.
- Consider using Fairfax County’s model for citizen involvement (a presentation about this model will be provided at the March SWMS meeting).
- Create effective ways to inform, educate, and engage the broader public in the watershed planning process (i.e. through website, environmental indicators, workshops, forums, resources). Engage the public in ways that make it easy for people to participate.
- Involve schools and use the schools and students as part of the citizen involvement in the planning process.
- Engage other existing subwatershed groups (e.g., Catoctin).

Objectives or Actions for the Watershed Plan

In addition to the guiding principles, values, and goals, SWMS team members also began to suggest ideas for specific objectives and actions for the watershed plan. While such detail is better suited for the actual watershed planning effort, in the interest of capturing and saving all ideas for future watershed planning, these suggestions are included below.

- Economic Development and Smart Growth
 - Ensure that development is site-appropriate and minimize the impacts of growth on natural resources.
 - Preserve property values.
 - Balance the watershed planning process; understand impacts of the watershed planning process with economic development, jobs, and housing needs with the expected increase in the growth rate in Loudoun County.
 - Establish a policy of “no net loss” of pervious surface in the subwatershed.
 - Integrate the watershed planning process with the land development process, such as through special protection or overlay districts.
 - Prioritize agricultural activities within the County and support farming monetarily.
- Quality of Life
 - Create and preserve public access to streams, waterways, and corridors.
 - Create a linear stream valley park system that provides for buffer protection, recreational access, and educational opportunities.
 - Promote greener lifestyles – e.g., green building, transportation, niche farming.

- Promote healthy lifestyles.
 - Create mechanisms to support economically disadvantaged citizens so the needs of the watershed can be met (e.g., develop resources for LID to be applied at the individual home scale).
- Regulations
 - Ensure regulation awareness and compliance.
 - Make sure regulations and ordinances support the watershed plan.
- Public involvement
 - Create ways that make it easy for citizens to be involved in the planning process, such as through attending a meeting of a citizen's group that might be difficult to reach otherwise.
 - Develop an educational component of the plan to raise awareness of citizens.
 - Engage citizens in the watershed planning process and implementation, and "go beyond the choir" in outreach efforts within the watershed to include people that might not otherwise be involved in the effort.
 - Have a strong education component in the watershed planning process to create a more informed citizenry (such as with septic system educational effort).
- Water Quality
 - Protect existing well water supply during the permitting and construction of new water wells.
 - Prioritize areas of focus within watershed specifically in regard to source water protection.
 - Protect, restore, and maintain healthy aquatic ecosystems (determine health of streams by macroinvertebrate studies and other means).
 - Maintain and restore riparian corridors.
 - Preserve wetlands.
 - Mitigate stream and wetland impacts within Loudoun County.
 - Develop enhanced stormwater design criteria.
- Data Management
 - Focus on or give priority to rectifying pre-existing conditions in the watershed planning effort (retrofits).
 - Inventory, map and monitor all water resources within the watershed.
- Plan Management
 - Loudoun County Govt. (BOS) create staff and a natural resources Dept. empowered to do environmental reviewing and design (with that capacity)
 - Evaluate current and future planning and funding option to realize plan

Report of Group 2: Watershed planning elements, flow and criteria for prioritization.

Before examining the process elements and criteria of a watershed plan, the Team felt it was necessary to briefly explore the overall purpose of making a watershed plan. The plan they envisioned would maintain what's good, protect what's sensitive such as headwaters or trout habitat, and restore what's degraded or damaged. Ensuring clean drinking water quality and supply was important. Planning for recreation and habitat along rivers could also improve water quality. After this brief exploration of purpose, the groups deliberated on the overall process elements and criteria for prioritization.

Process: A County-Wide Assessment

There was much support for a county-wide assessment to quickly identify threats to the watershed, and opportunities for action. This 'snapshot' assessment could be conducted based on assembly of existing data and resources, and it should be done quickly in a triage approach. The results of this county-wide assessment would characterize the many diverse subwatersheds of Loudoun County, and identify areas for priority attention. There was the sense that this should be a quick assessment, as the first part of a larger, on-going planning, implementation and monitoring process that comprises the entire watershed plan.

Protocols

A number of possible protocols for the county-wide assessment were suggested. A county-wide assessment should consider each of these methods, or possible combinations thereof, for Loudoun County.

- The Center for Watershed Protection's (CWP) Rapid Stream Assessment Technique (RSAT) methodology is a good model to adapt for Loudoun. This RSAT Phase II study is already underway and should be completed

by June 2006. The RSAT studies have been used for a number of other watershed, or water supply planning efforts including Linganore and Fairfax County.

- A Probabilistic Design methodology was also suggested for the county-wide assessment. Probabilistic Design is a methodology used by EPA that carefully selects statistically defensible monitoring spots across a watershed. It was used by VA DEQ for a statewide rapid watersheds assessment, and could be adapted for a county-level assessment.
- The CWP also has a Vulnerability Assessment methodology that was used for the Goose Creek Vulnerability Assessment that includes such things as analysis of imperviousness surfaces, forest coverage and riparian buffers. See: http://www.cwp.org/Vulnerability_Analysis.pdf. It was debated whether the time, money or detail of this Vulnerability Assessment method is feasible for a county-wide snap-shot assessment, or is more applicable to further sub-watershed analyses.

Data assembly and analysis

- There is a need to quickly gather and assess existing data for use in the county-wide assessment.
- Data collection protocols used by existing studies, or State-endorsed monitoring guidelines, should be followed.
- A number of data and studies were identified for an assessment and characterization effort. These include, but should not be limited to the following:
 - Nutrient loads and source determination (development, agriculture, etc).
 - Fish.
 - Groundwater levels.
 - RSAT II studies, TMDL reports, Goose Creek Vulnerability Study.
 - Biological and visual.
 - Sediments. There are some gaps in sediment data.

Other Assessment Considerations

The county-wide assessment should include or consider the following:

- Evaluate land use impacts such as solid waste siting, waste treatment, and future roads.
- Determine the location of surface water sources.
- Assess potential areas of future development. One possible indicator is zoning densities for potential build-out capacity.
- Carefully consider the integrity of existing data before using it in any assessment. Not all existing data is relevant to the assessment's purpose, and some is old or perhaps faulty.
- It was cautioned that bacteria are not necessarily the best measure of watershed health.
- RSAT would benefit from consistency across assessment teams, as was learned from the Fairfax County RSAT and planning experience.
- Biological and visual assessments are perhaps the most feasible in terms of timing and cost effectiveness.
- Groundwater modeling is needed especially for western Loudoun. USGS has data, the county has well, soils and other testing data that can be used in modeling. Modeling usually takes more time and costs more money and thus may not be feasible for the 'snap-shot' assessment, but should be considered for the plan itself.
- Surface water modeling would help determine the level of impact from projected build out and increases that result in imperviousness.

Criteria for Prioritization

The county-wide assessment should identify priority actions and areas based on the following suggested criteria and considerations.

- Meeting state and federal regulation requirements is a top priority.
- Priority should go to protecting undeveloped or minimally developed watersheds.
- Development pressure areas, or areas on the cusp of change for future build-out, are high priority.
- Efficiency is a priority when choosing where to start. This is the 'bang-for-the-buck' argument for prioritization, where watersheds with the greatest potential for efficient reduction of nutrients (MS4 offsets, nutrient trading) should receive implementation priority.
- Sensitive areas need priority, such as headwaters, groundwater recharge areas, and wetlands.
- Drinking water supply recharge areas are a priority.
- Where human health concerns exist from possible septic or groundwater, contamination is a priority.

- Any prioritization should take into account the different characterizations amongst sub-watersheds such as size, urban, rural, East, West, soil type, farming, drinking water supply shed, etc.
- VDOT corridors are a concern from traffic impacts or stream crossings.
- Any plan should be incremental so that identified priority areas can be treated first.

Other Monitoring Suggestions

- Beyond the county-wide assessment and subwatershed characterization, there is a need for a set network for on-going monitoring stations to assist with the plan's evaluation and updating.
- Maintaining ecological flows is a concern for the future of Loudoun's rivers. A gauging network would help monitor this.

Report of Group 3: County coordination and involvement of decision-makers

The SWMS Team was asked to develop ideas and options for management of the complex task of watershed planning. Based on IEN's interviews, a common concern among county staff and stakeholders alike is how data will be shared, how communication at the staff and leadership levels will be managed, how decision-makers could or should participate, and where leadership for the watershed planning will reside. Currently there is no clear "home" or designated authority for watershed planning. While the current phase of the project is being stewarded by the Department of Building and Development, concern expressed by numerous Team members is that accountability for follow-through and implementation will be lost without clear and formal designation of responsibility and authority.

Team members identified the following options and discussed their relative advantages and disadvantages.

- A. Create a new Environmental Services Department that would coordinate watershed planning. Advantages to this option are that i) as the county grows the need for this department will only increase, and ii) watershed planning would be placed in an appropriate home that makes sense. The disadvantages are that i) this would need funding and would therefore not be likely to be supported by the BOS, and ii) asking for something that isn't likely to happen is not going to result in the needed outcome, i.e. designation of formal authority and responsibility for watershed planning.
- B. Formally designate the Environmental Coordinator (Bruce McGranahan) as the formal coordinator for watershed planning. Advantages of this option are that i) the Environmental Coordinator currently is in the process of defining his role and therefore would be able to take on this responsibility fairly easily; ii) is able to work with all of the various Departments as needed, iii) reports directly to the Deputy County Administrator; iv) by virtue of the above, recognizes the cross-department scope of watershed planning, avoids turf battles, and offers the flexibility and authority needed for watershed planning. The disadvantage of this option is that the technical support for watershed planning will need to be drawn from different Departments.
- C. Formally designate an existing Department as the coordinator for watershed planning. Advantages of this option are that i) a new department would not need to be created; and ii) watershed planning would not be dependent on a specific position. Disadvantages of this option are that i) no existing department is perfectly suited to take on the task of watershed planning; and ii) could result in "turf battles" between Departments and compromise the collaboration needed for watershed planning.

Overall, considering these various options, the Team members agreed that Option A was not truly viable at this time, although it would be everyone's ideal solution over the long-term. Of Options B and C, Team members seemed to gravitate toward Option B as more preferable.

With regard to involvement of decision-makers in the watershed planning process, the SWMS Team strongly agreed that it is vital for the Board of Supervisors (BOS) to be aware and engaged throughout the process. In addition, the Team suggested that the Towns be treated in the same manner as the BOS, provided the same opportunities for involvement and the same presentations. Other decision-making bodies were identified as important to keep involved through the process: the Planning Commission, the Water Resources Technical Advisory Committee (WRTAC), and Transportation and Land Use Committee (TLUC), as well as County Administration. Specifically, the SWMS Team recommended that presentations be made to the following decision-making bodies during the remainder of the SWMS

process as well as throughout the comprehensive watershed management planning process: the BOS, the Planning Commission, incorporated towns (possibly via the Coalition of Loudoun Towns (COLT)), the Water Resources Technical Advisory Committee (WRTAC), and the Land Use and Transportation Committee (LUTC). Presentations should be made in April 2006, prior to the SWMS Team final meeting in May 2006, and again in late June 2006 to present the SWMS Team final Declaration of Cooperation. At this presentation, the SWMS Team suggested that the BOS be asked to indicate via straw poll its ongoing commitment and support for the next phase of the watershed management planning process. Further, the SWMS Team recommended that presentations be opened by the County Administrator, with technical parts of the presentation given by Bruce McGranahan or Kelly Baty. Lastly, SWMS Team members and stakeholders in the watershed planning process should also be included in the presentations to give voice to the wide representation involved during the planning process.

Review Progress, Agenda for Next Meeting

The conclusion of the meeting was spent reviewing the progress made, homework assignments, and agenda and presentations or information needed for the next meeting.

Three committees were identified to develop language suggestions or proposals for consideration by the full SWMS Team for three specific areas:

1. **Scoping Committee** to determine a draft scope for the watershed planning effort (the number of watersheds to include, how divided/combined). *Otto Gutenson, Mark Peterson, Darrel Schwalm and David Ward.*
2. **Funding Committee** to develop a funding strategy. *Kelly Baty, Charles Faust, and Ed Gorski.*
3. **Goals Committee** to review IEN's draft goals/ values / citizen involvement language for the strategy for watershed planning. *Gem Bingol, Jim Christian, Todd Danielson, and Dave Snellings.*

Committees need to provide their draft language to the facilitation team by **Friday, March 17.**

Team members offered the following ideas for presentations at the next meeting:

- Overview of Montgomery County, Maryland's watershed planning process
- Information on prioritization and a low cost approach for watershed assessment
- Loudoun Parks – plans for public uses for stream valley trails
- Mandates/regulations for statutory requirements for water supply planning, nutrient controls
- Success stories of environmentally sensitive development that protects water quality
- Status of groundwater, how it plays into watershed planning (hydrologic monitoring and stream flow)
- Fairfax public involvement model
- Modeling – how technical/ ups-downs of using different models

Further discussion about the SWMS meeting process included the following comments:

- A participant raised the caution that this is a strategic planning process; the Team is not actually making a plan at this stage, and this is important to remember for the remainder of this effort.
- The next meeting should examine further how to establish priorities based on a county-wide basis, or by subwatershed basis.
- Team members were asked to begin talking within their respective organizations about organizational commitments that could be included in the final "Declaration of Cooperation" and to bring beginning drafts of these commitments to the March meeting.
- All members of the Board of Supervisors will be informed of the next meeting and invited to attend.
- SWMS Presentations are needed for the Water Resources Technical Advisory Committee (WRTAC) and the Land Use and Transportation Committee (LUTC), before the final May meeting. These presentations should ideally be scheduled for April. Charlie Faust volunteered to get SWMS on the WRTAC agenda for the 4th Monday in April. Bruce McGranahan will be asked to schedule presentations for all groups.
- If participants cannot attend the next meeting, please identify an alternate and inform the facilitators.

Participant Commitments and “Homework” for March

1. What level of technical modeling is needed and appropriate? For background consult the following two resources:
 - EPA’s “Handbook for Developing Watershed Plans” to review ideas for model selection.
 - Center for Watershed Protection’s material entitled “Methods for developing watersheds.”
2. What is the best scope for Loudoun’s watershed planning: one County-wide watershed plan, or five different watershed plans, or 15 different watershed plans?
3. Using the prioritization criteria developed by the SWMS team, should specific watershed problems be prioritized first on a county-wide basis, or should sub-watersheds overall be prioritized based on the number of problems in those sub-watersheds?
4. SWMS Committees to draft language; draft language due by Friday, March 17 . Please E-Mail draft language to Christine Gyovai at christineg@virginia.edu.
4. Review and provide additions to the Inventory of Activities by Friday, March 10 to Jason Espie at jespie@virginia.edu.

The next meeting of the SWMS team is March 23rd and 24th at the Best Western Hotel in Leesburg, Virginia.

LOUDOUN COUNTY
Strategic Watershed Management Solutions (SWMS)
Protocols and Ground Rules for the SWMS Team

Purpose & Scope of Process	<p>The SWMS Team purpose and scope is:</p> <ol style="list-style-type: none"> 1. The SWMS Team purpose and scope is to: <ul style="list-style-type: none"> • Develop a framework and shared vision for the Loudoun County watershed planning process, as well as shared goals and vision for the Loudoun watershed. • Represent the views and concerns of Loudoun’s citizens and stakeholder organizations, and to inform these respective organizations of the progress and decisions made by the SWMS team. • Develop or address the development during the watershed planning process of indicators for water quality and quantity. • Develop criteria for prioritizing watershed planning activities. • Identify ways that Loudoun organizations and citizens can work together through the watershed planning process. • Define the scope of data that needs to be analyzed during the watershed planning process, identify sources of these data as well as data gaps (needs), and identify types of data that might be useful in the future. Develop a strategy for data compilation and analysis. Develop strategies to make data available to stakeholders. Define the nature of the watershed planning process – politically or watershed based. • Identify sources of funding for the watershed planning process and implementation activities. • Identify areas of agreement as well as issues that require further discussion, to identify resources that can be shared, and to develop commitments that can be made for participation and contributions to the watershed planning process.
Participation	<p>SWMS Team Membership: See attached list of members.</p> <p>Alternates: Alternates may be appointed by representatives of civic groups and organizations. Alternates may participate in discussion and consensus decisions only in the absence of the official SWMS Team member.</p> <p>Resource Members: Loudoun County staff who are not official Team members will serve as resource members. They may participate fully in the discussions and will share information about issues, constraints, and possible impediments to implementation. They are expected to be candid in their views.</p> <p>Observers, Other Interested Parties: Meetings are open to observers. Comments by observers may be offered in writing or orally (provided time permits) at the end of each session. Observer comments may also be invited during the session.</p> <p>Media: Meetings will be open to the media. Participants may speak about their own views to the media, but should not to represent the views of the SWMS team. Information may be</p>

	<p>provided by Loudoun County for media coverage before and/or after meetings.</p> <p>Public Access: Information about the SWMS effort should be made available to the public, such as on the Building and Design departmental website.</p>
Roles and Responsibilities	<p>All Team members shall have equal voice and status. Other participants in the SWMS work can serve in an advisory and advocacy position.</p> <p>Participant responsibilities to constituents: Members agree to obtain guidance from their constituents and communities so that they can accurately represent the views and interests of their constituents and communities. They will communicate information learned at meetings and will present SWMS Team decisions to their constituents for endorsement.</p> <p>Media Contact: SWMS team members who speak outside of the meetings will speak for themselves and express their own views. They will not represent an official SWMS point of view. The SWMS program manager and facilitators may describe the group process and share materials with the media as directed by the group.</p>
Sharing Information During and After Meetings	<p>Members are encouraged to discuss issues raised during the meetings with their constituents without attributing positions and attitudes to specific people.</p> <p>Members will be open and candid in their views.</p> <p>Members will speak with focus and brevity so that everyone may have an opportunity to speak.</p> <p>Cell phones will either be turned off or calls taken outside the meeting room.</p> <p>One person speaks at a time.</p>
Decision-making	<p>Consensus: All decisions of the SWMS Team are understood to be recommendations for Loudoun County's eventual comprehensive watershed planning effort, to be submitted to the Board of Supervisors and other decision-making entities for their consideration and action.</p> <p>The SWMS Team will make key decisions by consensus, and at any time Team members may request time to consult their organizations prior to polling.</p> <p>Consensus means that all members can live with and support the decision. If one member cannot live with the decision, consensus is not achieved and the group will continue working on the issue or it will be tabled.</p>
Implementation	<p>The shared vision and framework for Loudoun County's watershed planning effort will be incorporated into a document that will guide the watershed planning (a Declaration of Cooperation or Memorandum of Understanding will be considered and discussed by the SWMS Team).</p>
Timetable	<p>The SWMS Team will meet three times: February 22-23, March 23-24, and will conclude its work on May 11.</p>

Meeting Participants February 22-23, 2006

Water Supply

Todd Danielson, Loudoun County Sanitation Authority
Tony Dawood, Loudoun County Sanitation Authority

Federal & State Agencies

Marc Aveni, Virginia Department of Conservation and Recreation
Mark R. Bennett, U.S. Geological Survey - Director of Water Resource
Stacey Sloan Blersch, U.S. Army Corps of Engineers
Jim Christian, SWCD District Board
Debra Gutenson, U.S. Environmental Protection Agency - Office of Ground Water and Drinking Water
Otto Gutenson, U.S. Environmental Protection Agency - Wetland and Waters Program
Peter R. Holden, Loudoun Soil & Water Conservation District
Nick Ratcliff, USGS (retired)
Pawan Sarang, P.E., Virginia Department of Transportation
Bob Slusser, Virginia Department of Conservation and Recreation
Bryant Thomas, Virginia Department of Environmental Quality
Chris Van Vlack, Virginia State Soil and Water Conservation Districts
Larry Wilkinson, U.S. Department of Agriculture, NRCS

Loudoun County

Wm. Kelly Baty, Loudoun County Building & Development
Alex Blackburn, Loudoun County Building & Development
Dennis Cumbie, Loudoun County
Laura Edmonds, Loudoun County Building & Development
Ed Erwin, Loudoun County Office of Mapping and Geographic Information
Joe Gorney, Loudoun County Planning Department
Steve Kayser, Loudoun County Building & Development
Sally Kurtz, Loudoun County Board of Supervisors
Robert Lee, Loudoun County Environmental Health
William Marsh, Loudoun County Building & Development
Bruce McGranahan, Loudoun County Planning Department
Mark Novak, Loudoun County Parks and Recreation
Glen Rubis, Loudoun County Building & Development
Trent Small, Loudoun County Office of Mapping and Geographic Information
Stephen Snow, Loudoun County Board of Supervisors
Todd Taylor, Loudoun County Building & Development
David Ward, Loudoun County Public Works

Towns And Cities

Samuel Finz, Lovettsville

Loudoun Public

Corey Childs, Loudoun Co. Cooperative Extension
Chris Hatch, Loudoun County Farm Bureau

Conservation & Environmental Groups

Gem Bingol, The Piedmont Environmental Council
Helen Casey, Goose Creek Scenic River Advisory Committee

Phil Daley, Loudoun Wildlife Conservancy
Fred Fox, Dept. of the Interior, Loudoun Wildlife Conservancy
Ed Gorski, The Piedmont Environmental Council
Darrell Schwalm, Loudoun Watershed Watch
Nancy West, Goose Creek Association

Development Community

Charlie Faust, Water Resources Technical Advisory Committee
Bill Hatzler, Toll Brothers
Mark Headly, Wetland Studies and Solutions, Inc.
George McGregor, Reed Smith LLP
Mark Peterson, Luck Stone Corporation
David Snellings, Greenvest

Regional Government

Charles Baummer, Metropolitan Washington Airport Authority
John Galli, Metropolitan Washington Council of Governments
Matt Meyers, Fairfax County, Stormwater Planning Division Contact
Katherine K. Mull, Northern Virginia Regional Commission

Facilitation & Support

Tanya Denckla Cobb, Institute for Environmental Negotiation, UVA
Jason Espie, Institute for Environmental Negotiation, UVA
Christine Muehlman Gyovai, Institute for Environmental Negotiation, UVA